
Console Logic & I/O Connections

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GENERAL

All audio and control I/O connections to the A-50 console are made through 12-pin connectors with locking tabs that connect to mating connectors on the console processor and extender boards, mic preamps, line preselector, and tape remote modules. There is one audio connector and one logic connector per input channel, and there are 6 connectors in the output/CR/SC section of the processor board for insert and output connections and on-air opto connections. In the meterbridge, there are two connectors on the DMP-50 dual mic preamp module (and 2 more for each additional optional DMP-50), 4 connectors on the optional line preselector, and 2 logic connectors on the optional tape remote translator board.

As supplied from the factory, the console requires no logic connections to function. Therefore an orderly installation begins with the audio wiring. Once proper audio operation is verified (i.e., no ground loops), proceed with the control wiring.

The supplied 12 pin connectors use crimp type pins. A crimp tool must be used, and an extraction tool is handy to remove pins that have been inserted in the wrong connector block hole, or if rewiring or wiring repair is needed in the future. Always be careful to double check pin numbering on the connector block and the wiring diagram before inserting the pin in the block.

Consoles are normally supplied with the outputs of the mic preamp wired to the "A" inputs of IN-50 modules 1 and 2. Channel 1 is preprogrammed to mute the control room speakers, so you won't hear anything from the control room speakers if channel 1 is turned ON. Channel 2 is preprogrammed to mute the studio speakers, so you won't hear anything from those speakers if channel 2 is turned ON. These mutes can be reprogrammed; see the section on dipswitch controlled functions.

The I/O connections can now be made. Note that a gap is provided at the back of the console, at the bottom, for cable entry.

Refer to the Module I/O Pinout text (page 3-10) to connect the console to your equipment. Note that each IN-50 module is a dual input ("A" and "B") line level module. If a microphone level input is desired, route the signal to one of the DMP-50 inputs. The DMP-50 outputs are normally connected to the "A" inputs of the first IN-50 modules. Recommended setup is to have all

microphones connected to the first channels, with the remaining channels used as line inputs. Group input types together. For example, if you have three cart machines, connect them to the "A" inputs of three successive IN-50 modules.

Connect seldom used sources to the "B" inputs, if necessary. Another use of the "B" inputs is to duplicate the connections to often used sources, giving a level of signal security through redundancy. Note that the "B" inputs should not be used for microphones in the studio or control room, since the studio and control room mute functions are not available at these inputs.

Refer to the Module I/O Connection Section and note that the audio signal connections follow a logical pattern. Pins are grouped in 4 groups (called pairs for this discussion) of 3 pins each (1-3, 4-6, 7-9, and 10-12). The first pin of each group (1, 4, 7, and 10) is audio common, or ground, for connection of shields. The next pin (2, 5, 8, and 11) is the low side for balanced signals, or ground for unbalanced signals. The third pin (3, 6, 9, and 12) is the high side for balanced signals, or the signal connection for unbalanced ones.

In the case of stereo signals, left is always assigned to the first (pins 1-3) or third (pins 7-9) pair of a connector, and right is always assigned to the second (pins 4-6) or fourth (pins 10-12) pair.

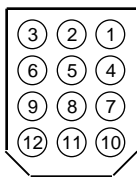
The console is provided with insert connectors on both the PGM and the AUD signals. The insert points (unbalanced) are normally jumpered, so if you do not plan on doing any processing of these signals you can leave the insert connectors unconnected. If you wish to insert some type of processing device in either of these lines, you must wire to the insert connector in question. Note that the insert output is wired to the external device's input, and the external device's output wires back to the console insert input. Note also that the 10 ohm jumper resistors that normally bypass the insert point must be removed if the inserts are to be used. Remove the correct resistor according to the chart below:

LT PGM	R104
RT PGM	R103
LT AUD	R102
RT AUD	R101

Although insert points are not included for each channel separately, the mic channels may be processed by considering the connection from the DMP-50 output to the IN-50 input as an insert point. Wire the DMP-50 output to the external device's input, and wire the external device's output to the IN-50 input.

Once the signal wiring is complete, check that each item is correctly wired before continuing.

Key diagram showing back of typical 12-pin I/O connector plug, with pin numbers oriented as they would be seen while wiring. Beveled corners correspond to PCB mounted mating sockets.



For exact location of these resistors, see A-50 Processor Board Load Sheet Drawing, Page 7-2 (upper right).

CONSOLE LOGIC

Dipswitch Controlled Functions

The dipswitch positions on each input channel are numbered from one to seven, and control the functions described below.

Note dipswitches are ON with the switch lever to the right, or OFF with the lever to the left.



(1) TB TO STUDIO - sends the module's pre-fader left signal to the studio talkback bus. This function is normally used on the announcer mic channel module to permit control room to studio communication.



(2) CR MUTE - causes the console's control room output to be muted when a programmed module, with its A input selected, is triggered ON. This prevents control room feedback when the announcer's mic channel is open.



(3) ST MUTE - causes the console's studio output to be muted when a programmed module, with its A input selected, is triggered ON. This function is used to prevent feedback when the studio announcer mic channel is open.



(4) CUE DROPOUT - causes a channel that is in CUE to drop out of CUE when its ON button is pushed.



(5) LOCAL OFF ENABLE - allows the channel's logic circuitry to control the illumination of the channel OFF lamp (as shown). If an external device, such as a cart machine, will control the channel OFF lamp, this dipswitch should be moved to its OFF position.



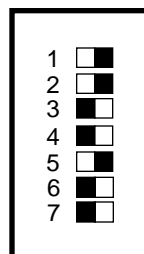
(6) CUE ENABLE - interrupts the headphone signal with the CUE signal when the programmed channel is in CUE. CR can also be programmed for interruption; see the discussion below on the CR/SC dipswitch functions for further information.



(7) TIMER RESTART - causes the console timer to automatically reset to zero and start counting when the programmed channel's ON button is pushed. (Note timer must already be counting in order to continue count after resetting to zero.)

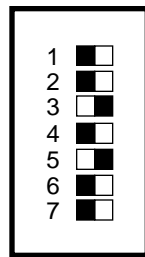
Typically, the IN-50 dipswitches as set up as described below: this is the factory default setting. Input (IN-50) dipswitches are ON with the switch lever to the right, or OFF with the lever to the left.

Channel 1 is set up for a control room microphone. Position 1 of the dipswitch is ON to enable the Talkback-to-Studio function for that channel, allowing the console operator to talk to the studio by using the "TB" switch on the SC-50 module. NOTE THAT ONLY ONE IN-50 MODULE CAN BE PROGRAMMED FOR TALKBACK TO STUDIO; PROGRAMMING OF THIS FUNCTION FOR MORE THAN ONE MODULE AT A TIME WILL RESULT IN SEVERE DISTORTION. Position 2 of the switch is ON to enable the control room mute function for that channel, to prevent the control room mic signal from appearing at the control room speakers. Since the control room mic can talk to the studio via talkback, the studio mute function for that channel is disabled by turning position 3 of the switch OFF. Positions 4 and 6 are



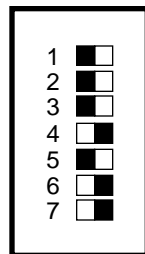
CONSOLE LOGIC & I/O CONNECTIONS

OFF since the cue function is not required for this signal. Position 5 is ON to enable local control of the OFF lamp. Position 7 is normally OFF. If it is turned ON, the console timer will be reset whenever the control room mic is turned ON.



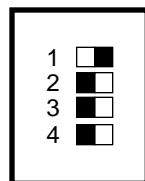
Channel 2 is set up for a studio microphone. Position 1 of the dipswitch is OFF to disable the Talkback-to-Studio function for that channel. Position 2 of the switch is OFF to disable control room mute. Position 3 of the switch is ON to enable the studio mute function, which prevents feedback through the studio monitors when the channel is open. Positions 4 and 6 are OFF since the cue function is not required for this signal. Position 5 is ON to enable local control of the OFF lamp. Position 7 is normally OFF. If it is turned ON, the console timer will be reset whenever the studio mic is turned ON.

If additional studio mics are used (requiring additional DMP-50 modules), they may be set up the same as the channel 2 module.



The remaining channels are line inputs, used with cart, CD, tape machines, or any other line level signal. Positions 1-3 of the dipswitch are OFF, disabling Talkback-to-studio and the mutes. Position 4 and 6 are ON to enable CUE with Dropout. With this feature the operator can listen to the source material on an OFF channel in the headphones or control room speakers by pressing the channel's CUE button. Then CUE can be left, and the channel turned ON, by hitting the ON button. Position 7 is ON if the timer should start at zero when the channel is selected. Position 5 is OFF if the machine connected to the module is set up to signal that it is READY by flashing the module OFF lamp; otherwise the switch is ON to enable the OFF lamp to be controlled by the module's logic.

The CR/SC section of the processor board contains a 4 position dipswitch to provide the following additional functions:



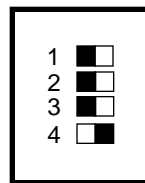
- (1) CUE TO CR LEFT - interrupts the left control room speaker with the CUE signal whenever an IN-50 module programmed for CUE ENABLE is placed in CUE.



(2) CUE TO CR RIGHT - interrupts the right control room speaker with the CUE signal whenever an IN-50 module programmed for CUE ENABLE is placed in CUE.



(3) LEFT STUDIO DIM - attenuates the left studio output by approximately 20 dB whenever an IN-50 programmed for ST MUTE is on.



(4) RIGHT STUDIO DIM - attenuates the right studio output by approximately 20 dB whenever an IN-50 programmed for ST MUTE is on.

Note that these dipswitch functions may be used in any combination, according to the needs of the installation.

Typically, the output dipswitches as set up as described below: this is the factory default setting. Output dipswitches are ON when the right side of the lever is pressed down.

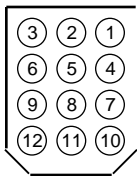


If using a control room mic and control room speakers, set the first two positions of the output dipswitch with the right side of the lever down to keep the control room microphone signal out of the control room speakers. (The CR MIC module, usually channel 1, must be programmed for CR mute.) The remaining two dipswitch positions can be programmed to have the material in the studio speakers reduced by 20 dB, instead of completely muted, when the Talkback function is used.

Once the dipswitch settings have been made, check that each switch is correctly programmed before continuing.

MODULE CONTROL PORTS

Key diagram showing back of typical 12-pin I/O connector plug, with pin numbers oriented as they would be seen while wiring. Beveled corners correspond to PCB mounted mating sockets.



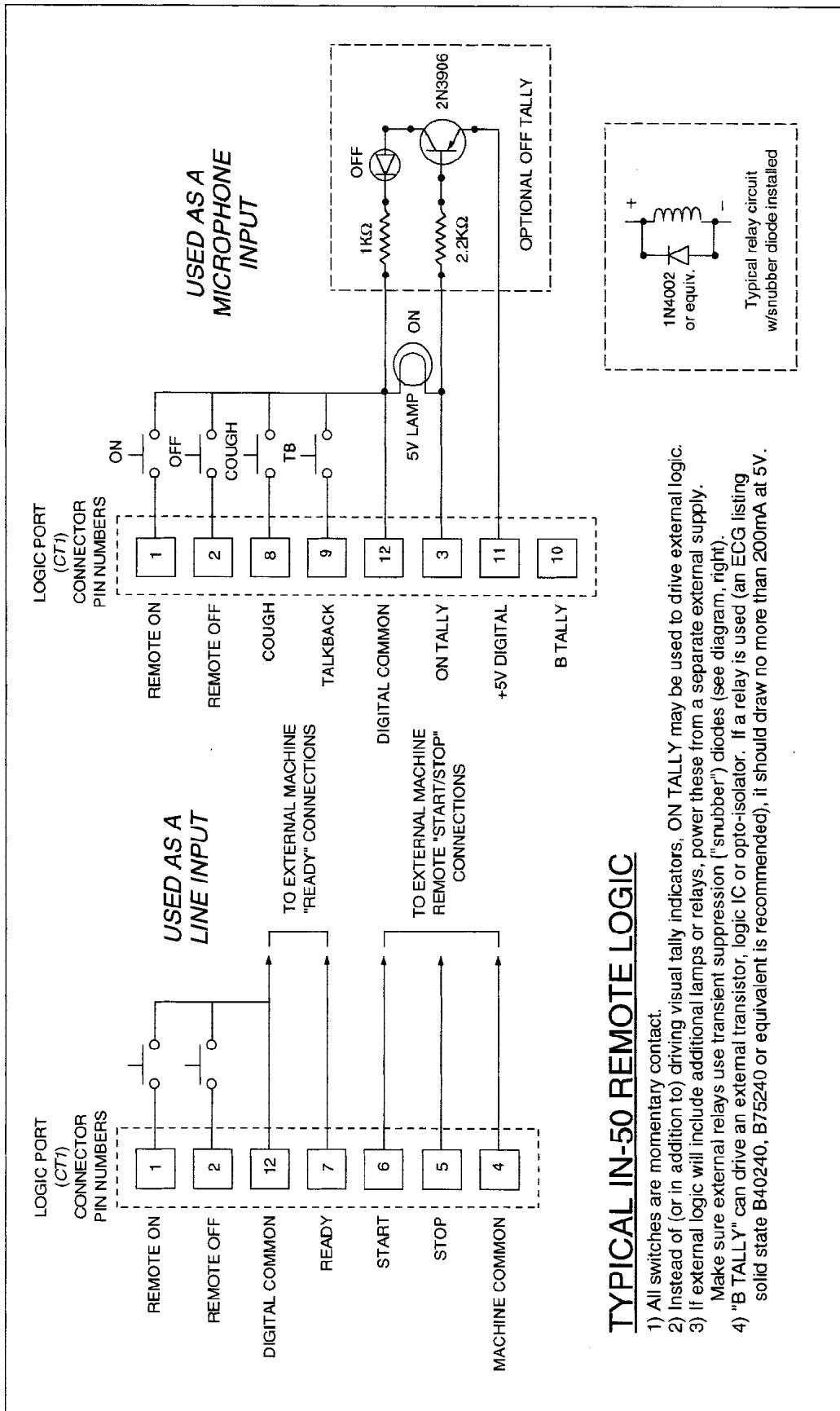
See drawing on page 3-9, "Typical Control Room On-Air Tally Circuits" for on-air tally relay wiring details.

The following logic functions, listed by pin number, are available at the logic port of each IN-50 module:

- (1) REMOTE ON - connected momentarily to DIGITAL COMMON to turn channel on from a remote location.
- (2) REMOTE OFF - connected momentarily to DIGITAL COMMON to turn channel off from a remote location.
- (3) ON TALLY - permits a 5V lamp to be controlled by the module's channel ON circuit.
- (4) MACHINE COMMON - is provided so that remote machine START and STOP can function without the need to tie the console common and the remote machine common together.
- (5) REMOTE STOP - allows a remote machine to be stopped by pushing the module's channel OFF button.
- (6) REMOTE START - allows a remote machine to be started by pushing the module's channel ON button.
- (7) READY - allows a remote machine to control the module's channel OFF switch indicator lamp. The LOCAL OFF ENABLE dipswitch must be in the OFF position.)
- (8) COUGH - provides a remote momentary OFF function.
- (9) TALKBACK - a continuous contact closure from this line to digital common places the module in CUE. If the module's CUE ENABLE dipswitch is activated, the CUE bus signal is sent to the headphones, and to the control room speakers if so programmed at the CR/SC dipswitch.
- (10) B TALLY - provides a logic high of 5V when the module's B inputs are selected. The signal is used to light an LED indicator or otherwise used to develop A/B follow logic functions.
- (11) +5 VOLTS - provides power source for external circuitry.
- (12) DIGITAL COMMON - provides power return for external circuitry.

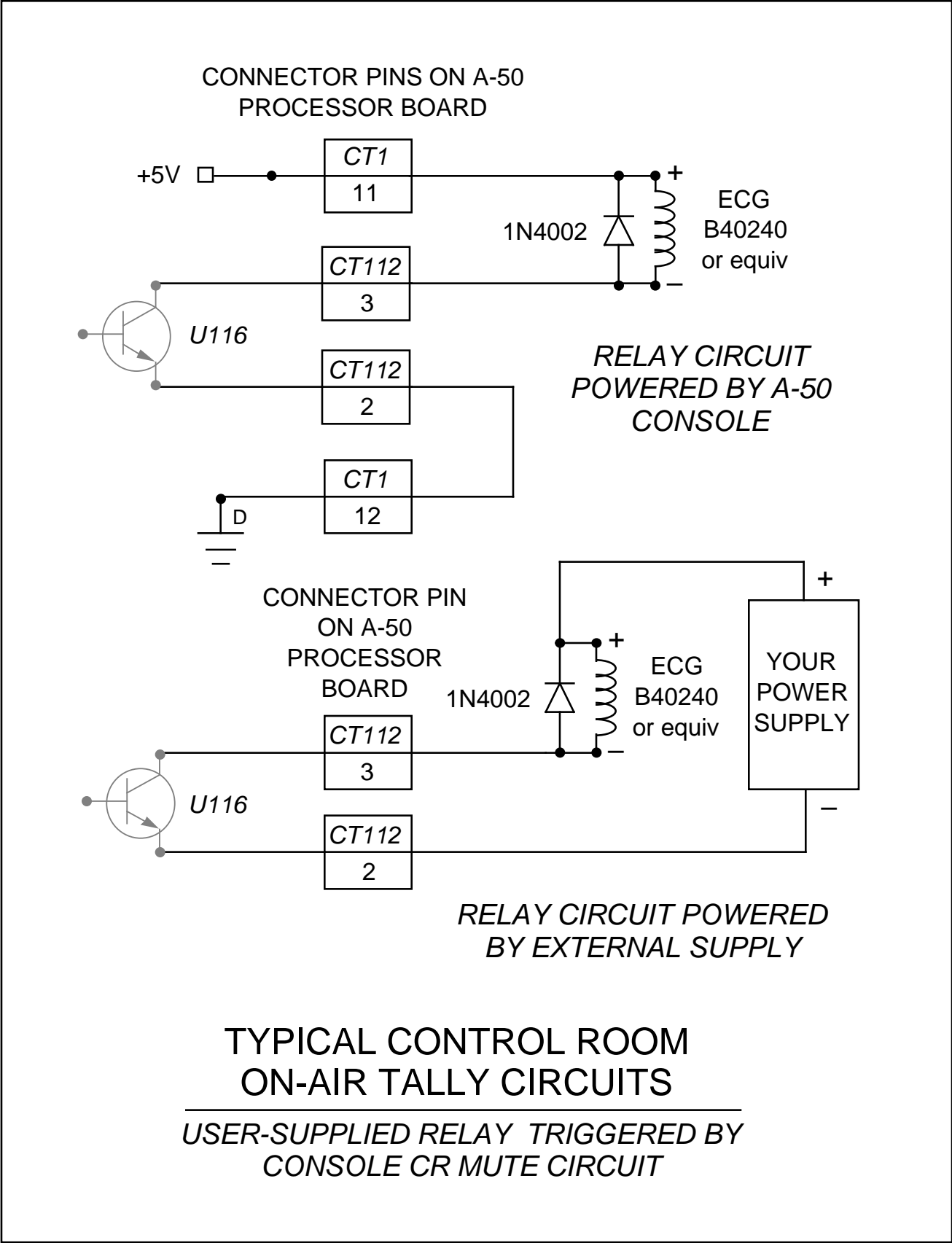
For controlling "on-air" tally functions, an opto isolator is provided. The opto transistor collector and emitter connections are available at a 12 pin connector in the CR/SC section of the processor board.

Refer to the Module I/O pinout text and wire the IN-50 logic connectors. Typically, a mic channel will use the REMOTE ON, REMOTE OFF, ON TALLY, COUGH, and TALKBACK signals, along with +5 VOLTS and DIGITAL COMMON. A line input will use REMOTE ON, REMOTE OFF, ON TALLY, REMOTE START, REMOTE STOP, and READY, along with +5 VOLTS, DIGITAL COMMON, and MACHINE COMMON. The schematic diagram ("Typical IN-50 Remote Logic"; next page) shows typical connections for both mic and line inputs.



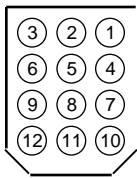
TYPICAL IN-50 REMOTE LOGIC

- 1) All switches are momentary contact.
- 2) Instead of (or in addition to) driving visual tally indicators, ON TALLY may be used to drive external logic.
- 3) If external logic will include additional lamps or relays, power these from a separate external supply. Make sure external relays use transient suppression ("snubber") diodes (see diagram, right).
- 4) "B TALLY" can drive an external transistor, logic IC or opto-isolator. If a relay is used (an ECG listing solid state B40240, B75240 or equivalent is recommended), it should draw no more than 200mA at 5V.



MODULE I/O CONNECTIONS

Key diagram showing back of typical 12-pin I/O connector plug, with pin numbers oriented as they would be seen while wiring. Beveled corners correspond to PCB mounted mating sockets.



Module input/output signal connections are made via 12-pin AMP type connectors. Refer to the A-50 Processor board load sheet on page 7-2 for the exact location of specific connectors. Key drawing to left shows a typical connector. Note this key drawing applies to all 12-pin I/O connector text pinouts that follow in this section.

Note also that the audio signal connections follow a logical pattern. Pins are grouped in 4 groups (called pairs for this discussion) of 3 pins each (1-3, 4-6, 7-9, and 10-12). The first pin of each group (1, 4, 7, and 10) is audio common, or ground, for connection of shields. The next pin (2, 5, 8, and 11) is the low side for balanced signals, or ground for unbalanced signals. The third pin (3, 6, 9, and 12) is the high side for balanced signals, or the signal connection for unbalanced ones.

In the case of stereo signals, left is always assigned to the first (pins 1-3) or third (pins 7-9) pair of a connector, and right is always assigned to the second (pins 4-6) or fourth (pins 10-12) pair.

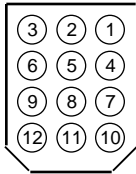
The PROGRAM, AUDITION, TELEPHONE, CONTROL ROOM and STUDIO outputs are electronically balanced, 10 ohms output impedance; minimum load is 600 ohms. **As the outputs are electronically balanced, care must be exercised when connecting them to an unbalanced system.** While temporarily shorting the low side of the output signal to ground will not cause any problems, continued operation will result in increased distortion, decreased reliability, and possible oscillation problems. **If you must connect the output to an unbalanced system, be sure to leave the low side unterminated, and connect the unbalanced system to the high side output and shield connections.**

IN-50 Audio Input

(CT2, A-50 Processor Board load sheet dwg)

- Pin 1 - A INPUT LEFT, SHIELD
- Pin 2 - A INPUT LEFT, LOW
- Pin 3 - A INPUT LEFT, HIGH
- Pin 4 - A INPUT RIGHT, SHIELD
- Pin 5 - A INPUT RIGHT, LOW
- Pin 6 - A INPUT RIGHT, HIGH
- Pin 7 - B INPUT LEFT, SHIELD
- Pin 8 - B INPUT LEFT, LOW
- Pin 9 - B INPUT LEFT, HIGH
- Pin 10 - B INPUT RIGHT, SHIELD
- Pin 11 - B INPUT RIGHT, LOW
- Pin 12 - B INPUT RIGHT, HIGH

Key diagram showing back of typical 12-pin I/O connector plug, with pin numbers oriented as they would be seen while wiring. Beveled corners correspond to PCB mounted mating sockets.



IN-50 Logic

(CT1, A-50 Processor Board load sheet dwg)

- Pin 1 - REMOTE ON
- Pin 2 - REMOTE OFF
- Pin 3 - ON TALLY
- Pin 4 - MACHINE COMMON
- Pin 5 - REMOTE STOP
- Pin 6 - REMOTE START
- Pin 7 - READY
- Pin 8 - COUGH
- Pin 9 - TALKBACK
- Pin 10 - B TALLY
- Pin 11 - +5V LOGIC SUPPLY (FUSED)
- Pin 12 - DIGITAL COMMON

Program Insert

(CT103, A-50 Processor Board load sheet dwg)

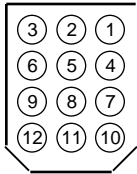
- Pin 1 - LEFT PROGRAM INSERT, FEED, SHIELD
- Pin 2 - AUDIO COMMON
- Pin 3 - LEFT PROGRAM INSERT, FEED, HIGH
- Pin 4 - RIGHT PROGRAM INSERT, FEED, SHIELD
- Pin 5 - AUDIO COMMON
- Pin 6 - RIGHT PROGRAM INSERT, FEED, HIGH
- Pin 7 - LEFT PROGRAM INSERT, RETURN, SHIELD
- Pin 8 - AUDIO COMMON
- Pin 9 - LEFT PROGRAM INSERT, RETURN, HIGH
- Pin 10 - RIGHT PROGRAM INSERT, RETURN, SHIELD
- Pin 11 - AUDIO COMMON
- Pin 12 - RIGHT PROGRAM INSERT, RETURN, HIGH

Audition Insert

(CT102, A-50 Processor Board load sheet dwg)

- Pin 1 - LEFT AUDITION INSERT, FEED, SHIELD
- Pin 2 - AUDIO COMMON
- Pin 3 - LEFT AUDITION INSERT, FEED, HIGH
- Pin 4 - RIGHT AUDITION INSERT, FEED, SHIELD
- Pin 5 - AUDIO COMMON
- Pin 6 - RIGHT AUDITION INSERT, FEED, HIGH
- Pin 7 - LEFT AUDITION INSERT, RETURN, SHIELD
- Pin 8 - AUDIO COMMON
- Pin 9 - LEFT AUDITION INSERT, RETURN, HIGH
- Pin 10 - RIGHT AUDITION INSERT, RETURN, SHIELD
- Pin 11 - AUDIO COMMON
- Pin 12 - RIGHT AUDITION INSERT, RETURN, HIGH

Key diagram showing back of typical 12-pin I/O connector plug, with pin numbers oriented as they would be seen while wiring. Beveled corners correspond to PCB mounted mating sockets.



PGM, AUD, TEL, CR and STUDIO outputs are electronically balanced. If feeding an unbalanced load, use HIGH and SHIELD. Do not short LOW to SHIELD permanently (see page 3-10).

Program/Audition Out

(CT101, A-50 Processor Board load sheet dwg)

- Pin 1 - LEFT PROGRAM OUTPUT, SHIELD
- Pin 2 - LEFT PROGRAM OUTPUT, LOW
- Pin 3 - LEFT PROGRAM OUTPUT, HIGH
- Pin 4 - RIGHT PROGRAM OUTPUT, SHIELD
- Pin 5 - RIGHT PROGRAM OUTPUT, LOW
- Pin 6 - RIGHT PROGRAM OUTPUT, HIGH
- Pin 7 - LEFT AUDITION OUTPUT, SHIELD
- Pin 8 - LEFT AUDITION OUTPUT, LOW
- Pin 9 - LEFT AUDITION OUTPUT, HIGH
- Pin 10 - RIGHT AUDITION OUTPUT, SHIELD
- Pin 11 - RIGHT AUDITION OUTPUT, LOW
- Pin 12 - RIGHT AUDITION OUTPUT, HIGH

Telephone/Cue Out/Ext In

(CT106, A-50 Processor Board load sheet dwg)

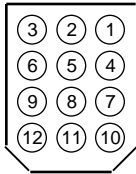
- Pin 1 - EXTERNAL INPUT LEFT, SHIELD
- Pin 2 - EXTERNAL INPUT LEFT, LOW
- Pin 3 - EXTERNAL INPUT LEFT, HIGH
- Pin 4 - EXTERNAL INPUT RIGHT, SHIELD
- Pin 5 - EXTERNAL INPUT RIGHT, LOW
- Pin 6 - EXTERNAL INPUT RIGHT, HIGH
- Pin 7 - CUE OUTPUT, SHIELD
- Pin 8 - CUE OUTPUT, LOW
- Pin 9 - CUE OUTPUT, HIGH
- Pin 10 - TELEPHONE OUTPUT, SHIELD
- Pin 11 - TELEPHONE OUTPUT, LOW
- Pin 12 - TELEPHONE OUTPUT, HIGH

CR/ST Outputs

(CT105, A-50 Processor Board load sheet dwg)

- Pin 1 - LEFT STUDIO OUTPUT, SHIELD
- Pin 2 - LEFT STUDIO OUTPUT, LOW
- Pin 3 - LEFT STUDIO OUTPUT, HIGH
- Pin 4 - RIGHT STUDIO OUTPUT, SHIELD
- Pin 5 - RIGHT STUDIO OUTPUT, LOW
- Pin 6 - RIGHT STUDIO OUTPUT, HIGH
- Pin 7 - LEFT CONTROL ROOM OUTPUT, SHIELD
- Pin 8 - LEFT CONTROL ROOM OUTPUT, LOW
- Pin 9 - LEFT CONTROL ROOM OUTPUT, HIGH
- Pin 10 - RIGHT CONTROL ROOM OUTPUT, SHIELD
- Pin 11 - RIGHT CONTROL ROOM OUTPUT, LOW
- Pin 12 - RIGHT CONTROL ROOM OUTPUT, HIGH

Key diagram showing back of typical 12-pin I/O connector plug, with pin numbers oriented as they would be seen while wiring. Beveled corners correspond to PCB mounted mating sockets.



Headphone/Opto Outputs

(CT112, A-50 Processor Board load sheet dwg)

- Pin 1 - AUDIO COMMON
- Pin 2 - OPTO EMITTER
- Pin 3 - OPTO COLLECTOR
- Pin 4 - AUDIO COMMON
- Pin 5 - SPARE
- Pin 6 - SPARE
- Pin 7 - LEFT HEADPHONE OUTPUT, SHIELD
- Pin 8 - LEFT HEADPHONE OUTPUT, LOW
- Pin 9 - LEFT HEADPHONE OUTPUT, HIGH
- Pin 10 - RIGHT HEADPHONE OUTPUT, SHIELD
- Pin 11 - RIGHT HEADPHONE OUTPUT, LOW
- Pin 12 - RIGHT HEADPHONE OUTPUT, HIGH

DMP-50 Input

(CT1, DMP-50 load sheet dwg)

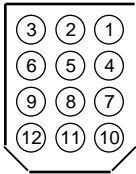
- Pin 1 - MICROPHONE 1 INPUT, SHIELD
- Pin 2 - MICROPHONE 1 INPUT, LOW
- Pin 3 - MICROPHONE 1 INPUT, HIGH
- Pin 4 - AUDIO COMMON
- Pin 5 - NO CONNECTION
- Pin 6 - NO CONNECTION
- Pin 7 - MICROPHONE 2 INPUT, SHIELD
- Pin 8 - MICROPHONE 2 INPUT, LOW
- Pin 9 - MICROPHONE 2 INPUT, HIGH
- Pin 10 - AUDIO COMMON
- Pin 11 - NO CONNECTION
- Pin 12 - NO CONNECTION

DMP-50 Output

(CT2, DMP-50 load sheet dwg)

- Pin 1 - MICROPHONE 1 OUTPUT, SHIELD
- Pin 2 - AUDIO COMMON
- Pin 3 - MICROPHONE 1 OUTPUT, HIGH
- Pin 4 - MICROPHONE 1 OUTPUT, SHIELD
- Pin 5 - AUDIO COMMON
- Pin 6 - MICROPHONE 1 OUTPUT, HIGH
- Pin 7 - MICROPHONE 2 OUTPUT, SHIELD
- Pin 8 - AUDIO COMMON
- Pin 9 - MICROPHONE 2 OUTPUT, HIGH
- Pin 10 - MICROPHONE 2 OUTPUT, SHIELD
- Pin 11 - AUDIO COMMON
- Pin 12 - MICROPHONE 2 OUTPUT, HIGH

Key diagram showing back of typical 12-pin I/O connector plug, with pin numbers oriented as they would be seen while wiring. Beveled corners correspond to PCB mounted mating sockets.



LS-50 Inputs 1 & 2

(CT3, LS-50 load sheet dwg)

- Pin 1 - LINE 2 LEFT INPUT, SHIELD
- Pin 2 - LINE 2 LEFT INPUT, LOW
- Pin 3 - LINE 2 LEFT INPUT, HIGH
- Pin 4 - LINE 2 RIGHT INPUT, SHIELD
- Pin 5 - LINE 2 RIGHT INPUT, LOW
- Pin 6 - LINE 2 RIGHT INPUT, HIGH
- Pin 7 - LINE 1 LEFT INPUT, SHIELD
- Pin 8 - LINE 1 LEFT INPUT, LOW
- Pin 9 - LINE 1 LEFT INPUT, HIGH
- Pin 10 - LINE 1 RIGHT INPUT, SHIELD
- Pin 11 - LINE 1 RIGHT INPUT, LOW
- Pin 12 - LINE 1 RIGHT INPUT, HIGH

LS-50 Inputs 3 & 4

(CT2, LS-50 load sheet dwg)

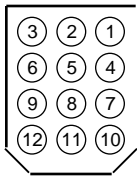
- Pin 1 - LINE 4 LEFT INPUT, SHIELD
- Pin 2 - LINE 4 LEFT INPUT, LOW
- Pin 3 - LINE 4 LEFT INPUT, HIGH
- Pin 4 - LINE 4 RIGHT INPUT, SHIELD
- Pin 5 - LINE 4 RIGHT INPUT, LOW
- Pin 6 - LINE 4 RIGHT INPUT, HIGH
- Pin 7 - LINE 3 LEFT INPUT, SHIELD
- Pin 8 - LINE 3 LEFT INPUT, LOW
- Pin 9 - LINE 3 LEFT INPUT, HIGH
- Pin 10 - LINE 3 RIGHT INPUT, SHIELD
- Pin 11 - LINE 3 RIGHT INPUT, LOW
- Pin 12 - LINE 3 RIGHT INPUT, HIGH

LS-50 Inputs 5 & 6

(CT1, LS-50 load sheet dwg)

- Pin 1 - LINE 6 LEFT INPUT, SHIELD
- Pin 2 - LINE 6 LEFT INPUT, LOW
- Pin 3 - LINE 6 LEFT INPUT, HIGH
- Pin 4 - LINE 6 RIGHT INPUT, SHIELD
- Pin 5 - LINE 6 RIGHT INPUT, LOW
- Pin 6 - LINE 6 RIGHT INPUT, HIGH
- Pin 7 - LINE 5 LEFT INPUT, SHIELD
- Pin 8 - LINE 5 LEFT INPUT, LOW
- Pin 9 - LINE 5 LEFT INPUT, HIGH
- Pin 10 - LINE 5 RIGHT INPUT, SHIELD
- Pin 11 - LINE 5 RIGHT INPUT, LOW
- Pin 12 - LINE 5 RIGHT INPUT, HIGH

Key diagram showing back of typical 12-pin I/O connector plug, with pin numbers oriented as they would be seen while wiring. Beveled corners correspond to PCB mounted mating sockets.



LS-50 Output

(CT4, LS-50 load sheet dwg)

- Pin 1 - LEFT OUTPUT, SHIELD
- Pin 2 - LEFT OUTPUT, LOW
- Pin 3 - LEFT OUTPUT, HIGH
- Pin 4 - RIGHT OUTPUT, SHIELD
- Pin 5 - RIGHT OUTPUT, LOW
- Pin 6 - RIGHT OUTPUT, HIGH
- Pin 7 - AUDIO COMMON
- Pin 8 - NO CONNECTION
- Pin 9 - NO CONNECTION
- Pin 10 - AUDIO COMMON
- Pin 11 - NO CONNECTION
- Pin 12 - NO CONNECTION

Tape Remote Switches 1-3

(CT2, T-50 load sheet dwg)

- Pin 1 - SWITCH 1, LED CATHODE
- Pin 2 - SWITCH 2, LED CATHODE
- Pin 3 - SWITCH 3, LED CATHODE
- Pin 4 - SWITCH 1, LED ANODE
- Pin 5 - SWITCH 2, LED ANODE
- Pin 6 - SWITCH 3, LED ANODE
- Pin 7 - SWITCH 1, COMMON
- Pin 8 - SWITCH 2, COMMON
- Pin 9 - SWITCH 3, COMMON
- Pin 10 - SWITCH 1, NORMALLY OPEN
- Pin 11 - SWITCH 2, NORMALLY OPEN
- Pin 12 - SWITCH 3, NORMALLY OPEN

Tape Remote Switches 4-6

(CT3, T-50 load sheet dwg)

- Pin 1 - SWITCH 4, LED CATHODE
- Pin 2 - SWITCH 5, LED CATHODE
- Pin 3 - SWITCH 6, LED CATHODE
- Pin 4 - SWITCH 4, LED ANODE
- Pin 5 - SWITCH 5, LED ANODE
- Pin 6 - SWITCH 6, LED ANODE
- Pin 7 - SWITCH 4, COMMON
- Pin 8 - SWITCH 5, COMMON
- Pin 9 - SWITCH 6, COMMON
- Pin 10 - SWITCH 4, NORMALLY OPEN
- Pin 11 - SWITCH 5, NORMALLY OPEN
- Pin 12 - SWITCH 6, NORMALLY OPEN

POWERSUPPLYINSTALLATION/CONNECTION

The PS-50 Power Supply, for the A-50 console, is contained in its own rack mount enclosure. Mount the power supply in a standard 19 inch equipment rack, keeping in mind that the supply needs adequate ventilation. The supply contains a cooling fan, with air vents at both ends of the supply. If the equipment rack is fully enclosed, it should have some form of forced air cooling, or else should have air vents at both sides next to the supply. Whether in an enclosed rack or an open frame rack, make sure that an adequate supply of fresh air is provided at the fan (left) side of the supply, and that the right side is not obstructed, to allow free flow of air from the supply.

Once the supply is mounted, connect the power cable at the console end (the power supply connector is located inside the meterbridge area, near the right end of the console). Note that the cable plug has to be rotated until the locating pins match the connector on the console. Do not force the connector on; it attaches easily when properly aligned. Connect the cable to the power supply in the same manner.

Once the power supply installation is complete, check the power supply mounting and cabling before continuing.

VU METER ALIGNMENT

With the console in place on the counter top, check the VU meters for static, power-off alignment. If any adjustment is needed, raise the hinged meter bridge and note the meter adjusters located in the rear center of the meters. Alignment is accomplished by using a small flat blade screw driver to turn the adjusting screws until the meter reading is correct. Note that the screw should always be turned clockwise, and that correct adjustment is made when the meter is brought UP to the correct mark from downscale. Also notice that the static zero position changes as the meter bridge is brought down to its normal position. Make small incremental adjustments and return the meterbridge to operating position between adjustments; continue this procedure until the meter static zeroes are correct with the meterbridge in position.

Note that the VU meter lamps are replaceable from the back of the meter.

Unless VU meters are noticeably mis-aligned, this procedure (which can be a lengthy process) is normally not required.

COMPLETING THE INSTALLATION

Plug the 8-pin dip plug from the CR-50 module into the socket CT110 (see Processor board load sheet for location of connectors), being careful to align pin 1 of the plug with pin 1 of the connector. You should not have removed any other connections from this module. If you have, reconnect them according to the chart below, making sure that all three pins of the plug align with all three pins of the connector on the board:

<u>CONTROL</u>	<u>COLORS</u>	<u>CONN WIRES FACE</u>
CUE LEVEL	red/org/brn	CT104 left
LEFT STUDIO	blu/grn/yel	CT108 left
RIGHT STUDIO	red/org/brn	CT107 left
LEFT HEADPHONE	blu/grn/yel	CT119 left
RIGHT HEADPHONE	red/org/brn	CT118 left
LEFT CONTROL ROOM	blu/grn/yel	CT121 right
RIGHT CONTROL ROOM	red/org/brn	CT120 right

Once all the CR cables are connected, carefully place the module into its proper location (third slot from right) in the mainframe.

Plug the 8-pin dip plug from the timer control board on the SC-50 module into the socket CT123 (see Processor board load sheet for location of connectors), being careful to align pin 1 of the plug with pin 1 of the connector. Plug the 8-pin dip plug from the assign board on the SC-50 module into the socket CT109. Connect the 3-wire cable from the SC-50 headphone jack to the connector CT117, making sure that all three pins of the plug align with all three pins of the connector on the board, and that the wires from the plug face the front of the console. If the 8-pin cable from the timer to the timer control board has been inadvertently disconnected, connect the 8-pin dip plug into the socket CT123, being careful to align pin 1 of the plug with pin 1 of the connector. Once all the SC cables are connected, carefully place the module into its proper location (second slot from right) in the mainframe.

If you have installed the Tape Remote option, carefully place the TR-6 module into its proper location (last slot on right) in the console; otherwise place the blank faceplate in this slot. **Make sure that none of the cables are being pinched between a faceplate and the mainframe, or between two adjacent faceplates.**

One module at a time, starting from the left end of the console, connect the 9-wire cable from the IN-50 fader to the connector CT4, making sure that all 9 pins of the plug align with all 9 pins of the connector on the board, and that the wires from the plug face to the left. Plug the 8-pin dip plug from the assign board on the IN-50 module into the socket CT3 (see Processor board load sheet for location of connectors), being careful to align pin 1 of the plug with pin 1 of the connector. Plug the 8-pin dip plug from the ON/OFF switch board on the IN-50 module into the socket CT6. As the cables from each module are connected, carefully place the module into its proper location. Again, **make sure that none of the cables are being pinched between a faceplate and the mainframe, or between two adjacent faceplates.**

Once the modules have been reinstalled, check the module connections carefully before continuing.

Once all of the modules are in place, the meterbridge is down, and no cables are being pinched, start replacing the screws that hold the modules in place. Don't tighten the screws until all are installed. With all the module screws started, install the three screws that hold down the meterbridge. When all of these screws are in place, tighten them.

Before connecting the console's AC power, turn all faders and level controls on the console and any monitor equipment connected to it down to minimum. In preparation for testing your installation, assign one channel to PGM and select PGM on the CR module.

The Power Supply AC connector may now be connected; this will turn on the console. At this point the VU meters should be lit, and the LEDs of any assign switches that are down should be lit. Each channel that has the local OFF feature programmed will have either its ON or OFF lamp lit. The CUE LEDs may be lit.

Turn the module you will begin testing with ON by pressing the ON button. The ON lamp should light. Make sure the channel is assigned to PGM and slowly move the fader up. You should see movement on the PGM meters, provided there is source material available for that channel. If you have trouble at this or any other point in the installation test, turn to the section on troubleshooting, at the end of the technical section of the manual.

Press the CUE button for that channel and slowly turn up the CUE level control; if the channel has been programmed for CUE, you should hear the source material in the console's CUE speaker. Note that the channel fader and ON/OFF status have no effect on the volume of the CUE signal.

Assign the channel to AUD and those meters should also move. Check other channels. Turn the console's control room level control to the 2 o'clock position, and slowly turn up the control room monitor amplifier; your source material should become audible. Assign a channel to studio, via PGM or AUD, turn the console's studio level control to 2 o'clock, and turn the studio monitor amplifier up. You should now be able to hear your source material in the studio. (If your power amplifier does not have input level controls, use external pads to allow a comfortable listening level with the console monitor pots set at 2 o'clock; this will assure optimal L—R tracking).

Test the other channels, the headphone jack (BE CAREFUL: LOUD SOUNDS IN THE HEADPHONES CAN DAMAGE YOUR HEARING), the external CUE output, the TEL output, and the output to the external headphone amplifier, if one is used in your installation. Check any external logic functions.

This completes the A-50 console installation.